

Paducah Citizens Advisory Board

DDFO Presentation

Reinhard Knerr, Paducah Site Lead

April 26, 2012



CITIZENS
ADVISORY BOARD



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

Presentation Agenda

- Inactive facilities removal
- Groundwater cleanup
- Site Management Plan
- Governor's Health and Safety Awards
- DUF₆ plant update
- Heath Middle School science project
- DOE Science Bowl
- National SSAB Chairs Meeting
- DOE-EM Senior Advisor Dave Huizenga visit
- Recent/upcoming documents

Inactive Facilities Removal: C-410 Feed Plant

- Nearly 90,000 ft³ of piping, equipment removed.
- Demolition of remaining 164,000 ft² to be completed by end of 2013.
 - LATA issued Request for Proposals March 15; held March 29 pre-bid meeting and tour.
- Key elements to complete before demolition:
 - HVAC and vacuum system stabilization.
 - Cold trap and ash receiver stabilization and isolation.
 - UF₆ piping system stabilization.



Front-line supervisor Jamie Peyton checks the status of valves before attaching a chemical trap to start purging UF₆ from piping.

Inactive Facilities Removal: Scale House

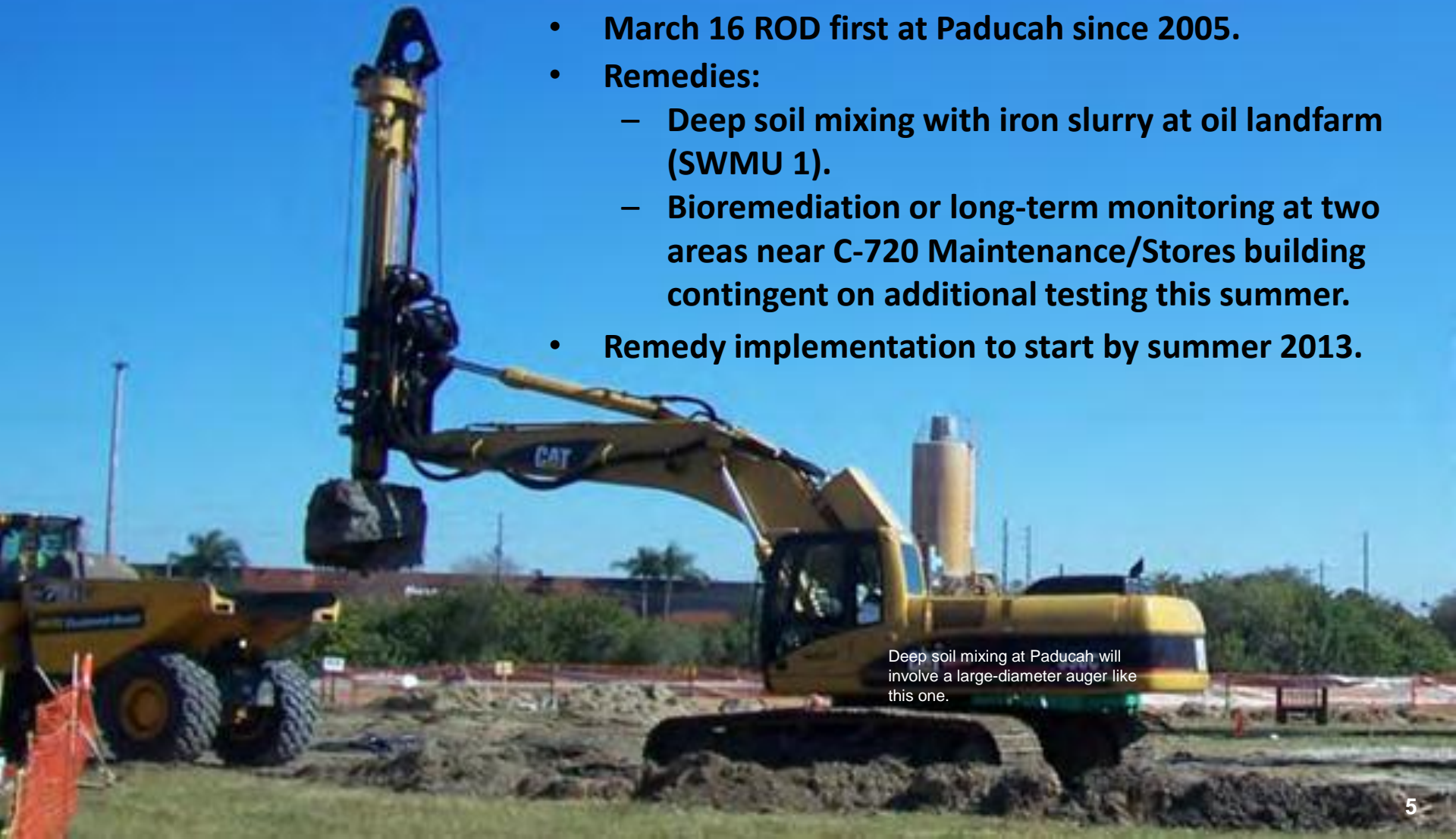


Heavy equipment demolishes the C-720-N Scale House, above. The scale, right, was preserved for the CAB because of potential historical significance.

- Crews in late February removed an abandoned railroad scale house in WKWMA southeast of the Paducah plant.
- Scale house was used in 1950s to weigh plant freight.
- Most of the materials were recycled.
- Scale preserved at CAB request.
- Scale house part of >142,000 ft² of inactive facilities to be razed through 2014.

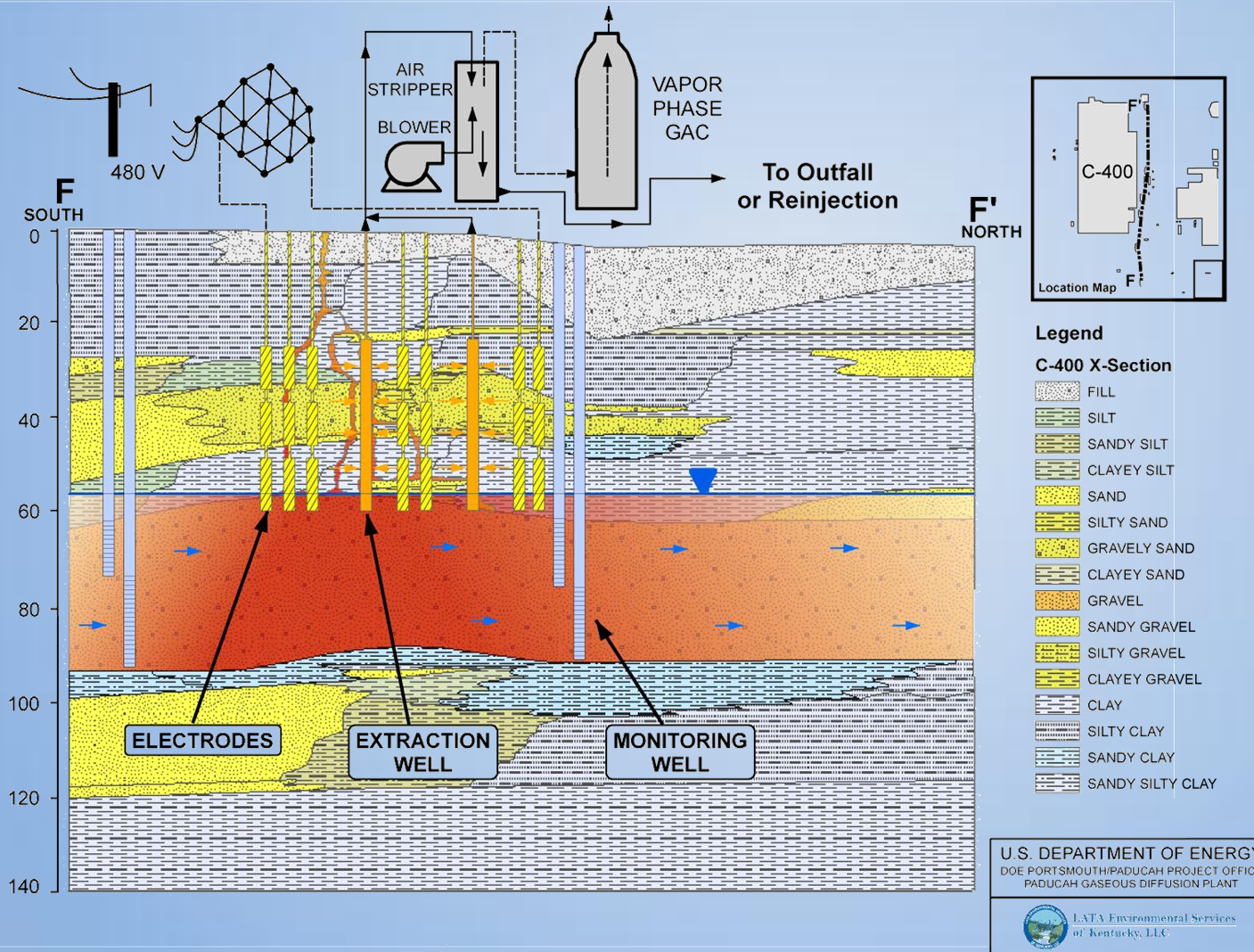
Groundwater Cleanup: Southwest Plume Source Removal

- March 16 ROD first at Paducah since 2005.
- Remedies:
 - Deep soil mixing with iron slurry at oil landfarm (SWMU 1).
 - Bioremediation or long-term monitoring at two areas near C-720 Maintenance/Stores building contingent on additional testing this summer.
- Remedy implementation to start by summer 2013.



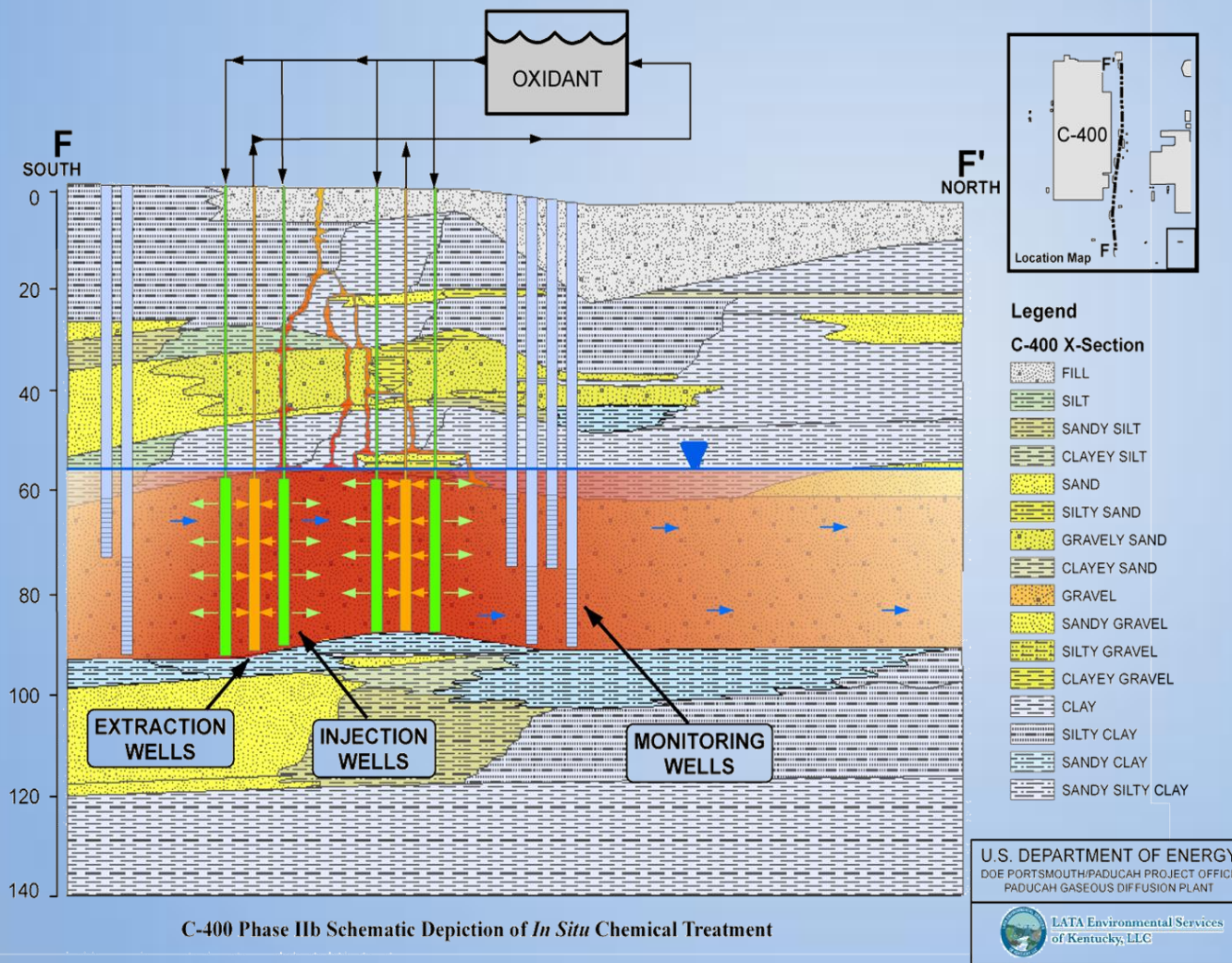
Deep soil mixing at Paducah will involve a large-diameter auger like this one.

Groundwater Cleanup: C-400 Source Removal Phase IIa



- Construction of electrical resistance heating system to depth of 60 ft. to start by end of summer for Phase IIa.
- Operation planned for 2013.
- Estimated maximum 2,500 gals. of TCE remain.

Groundwater Cleanup: C-400 Source Removal Phase IIb



- ROD amendment being prepared for Phase IIb
 - Potassium permanganate to be injected 60-100 ft. deep
 - Chemical oxidation expected to reduce source-based TCE by at least 90%.
 - Estimated maximum 4,500 gals of TCE remain.
 - Construction to begin in January 2014.

2012 Site Management Plan

- FFA parties approved FY 2012 Site Management Plan in March.
- Plan sets enforceable milestones for FY 12, 13, 14.
- Incorporates results of written decision on the Burial Grounds Operable Unit formal dispute.
- Key milestone dates added for C-400 Phase IIa and Phase IIb, as well as CERCLA waste-disposal alternatives.



Governor's Health and Safety Award



Kentucky Labor Secretary Mark Brown, third from right, presented Governor's Health and Safety Awards March 8 in a ceremony at the Paducah Site.

- DOE's three Paducah prime contractors received Kentucky's top health/safety award in March for nearly 5 million combined safe-work hours.
 - BWCS: 2.5 million
 - LATA KY: 1.25 million
 - SST: 1.08 million
- Labor Secretary Mark Brown said the winners achieve productivity through safety.

Depleted Uranium Hexafluoride (DUF₆) Plant



- Babcock and Wilcox Conversion Services (BWCS) continues phased startup of conversion operations.
- FY 2012 focus:
 - Achieve around-the-clock, 24/7 operation of all four conversion lines.
 - Safely convert DUF₆ cylinder inventory at design capacity.
- Plant operating one line and working to bring three online.
- About 1,400 metric tons of DUF₆ processed so far in FY 2012.
- Portsmouth-Paducah Project Office reviewing BWCS baseline for accuracy, completeness.

Heath MS Science Project

Heath Middle School gifted-talented science project

- Groups made presentations April 20 to DOE on how to reduce levels of zinc and tiny organism toxicity in outfall near DUF₆ plant.
- 26 students spent school year trying to determine how to resolve the zinc issue.
- DOE, LATA Kentucky, UK College of Engineering-Paducah, and KDEP mentors assigned to groups, who made several plant visits and worked after school.



Heath Middle School students Ashley Reagan and Evan Shepherd (background) test for zinc in solution, using kits provided by a grant through the UK College of Engineering-Paducah.

DOE Science Bowl

Third Annual Regional DOE Science Bowl in Paducah

- Calloway County Middle, Lone Oak High compete nationally April 26-30.
- Both won regional competition in March.
- DOE, contractors judged regionals.
- DOE, UK-Paducah Campus, WKCTC, Chamber Business-Education Partnership sponsored.
- 10 businesses contributed.



Coach Scott Pile congratulates his Calloway County Middle School team during the finals of the Department of Energy's Regional Science Bowl in Paducah. From left are team members Jaewon Kang (partially shown), Claire Umstead, Sam Morehead, and Martin Mikulcik.

National SSAB Chairs Meeting

EM Site-Specific Advisory Board chairmen and members from eight DOE sites toured the Paducah plant April 17 before holding their semiannual meeting at the Carson Center April 18-19. They are shown in front of the Feed Plant.



Dave Huizenga Visit

DOE-EM Senior Advisor Dave Huizenga, right, and Paducah Site Lead Reinhard Knerr look at a Paducah Site groundwater model that UK College of Design students created for the PGDP Citizens Advisory Board. The model was displayed at the Carson Center, where Huizenga spoke at the national DOE SSAB Chairs Meeting. This was Huizenga's first face-to-face meeting with the chairmen and first visit to the Paducah Site.



Dave Huizenga Visit



Left, LATA Kentucky Projects Manager Craig Jones greets EM Senior Advisor Dave Huizenga during Huizenga's first tour of the Paducah Site. Huizenga was briefed on the C-333 Process Building, Feed Plant cleanup, C-400 Source Removal Project, nickel ingots, burial grounds, and the DUF_6 Conversion Facility.

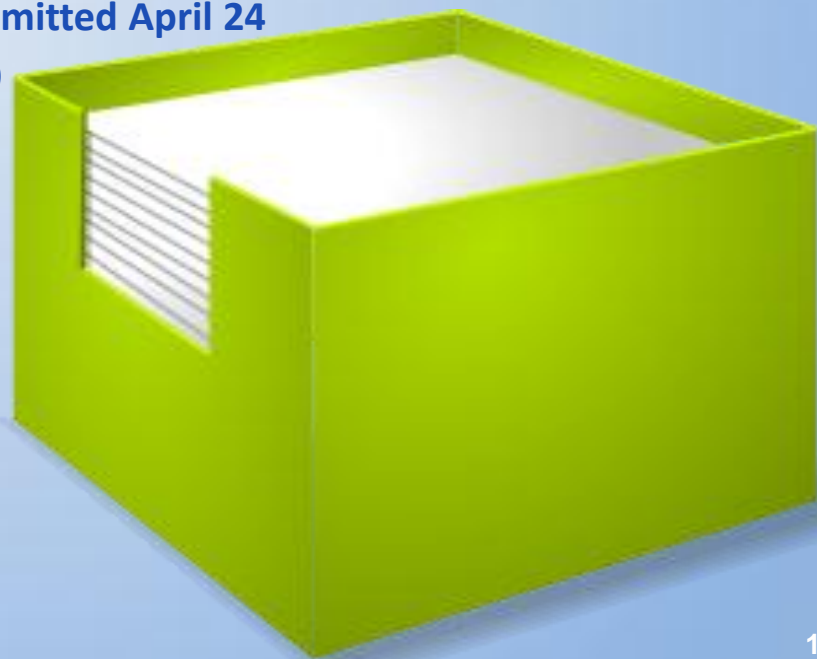
Bottom left, Huizenga and PPPO Manager Bill Murphie view the Paducah CAB groundwater model displayed at the SSAB Chairs Meeting.

Bottom right, Huizenga (upper left center) addresses SSAB chairmen.



Recent and Upcoming Documents

- Groundwater OU
 - ❖ Revised D2 Southwest Plume Remedial Design Work Plan – **due April 27**
 - ❖ D1 C-400 Phase IIa Remedial Action Work Plan – **due in May**
 - ❖ SW Plume 30% Remedial Design Report– **due in May**
 - ❖ D2 C-400 Phase IIb Proposed Plan – **due in early June**
- Burial Grounds OU
 - ❖ Feasibility Study (FS) SWMUs 5-6 – **submitted Feb. 29**
 - ❖ Revised SWMU 4 Sampling and Analysis Plan – **submitted April 24**
 - ❖ FS SWMUs 2, 3, 7, 30 – **planned submittal April 29**
- CERCLA Waste Disposal Alternatives RI/FS Report
 - **planned submittal in early May**
- D2 Surface Water OU RI/FS Work Plan
 - **planned submittal June 15**
- Soils OU Remedial Investigation Report
 - **planned submittal Aug. 15**



Discussion...



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